

IAEA Nuclear Security Series No. 20

Nuclear Security Fundamentals

# Objective and Essential Elements of a State's Nuclear Security Regime



**IAEA**

International Atomic Energy Agency

# THE IAEA NUCLEAR SECURITY SERIES

Nuclear security issues relating to the prevention and detection of, and response to, theft, sabotage, unauthorized access and illegal transfer or other malicious acts involving nuclear material and other radioactive substances and their associated facilities are addressed in the **IAEA Nuclear Security Series** of publications. These publications are consistent with, and complement, international nuclear security instruments, such as the amended Convention on the Physical Protection of Nuclear Material, the Code of Conduct on the Safety and Security of Radioactive Sources, United Nations Security Council Resolutions 1373 and 1540, and the International Convention for the Suppression of Acts of Nuclear Terrorism.

## CATEGORIES IN THE IAEA NUCLEAR SECURITY SERIES

Publications in the IAEA Nuclear Security Series are issued in the following categories:

- **Nuclear Security Fundamentals** contain objectives, concepts and principles of nuclear security and provide the basis for security recommendations.
- **Recommendations** present best practices that should be adopted by Member States in the application of the Nuclear Security Fundamentals.
- **Implementing Guides** provide further elaboration of the Recommendations in broad areas and suggest measures for their implementation.
- **Technical Guidance** publications include: **Reference Manuals**, with detailed measures and/or guidance on how to apply the Implementing Guides in specific fields or activities; **Training Guides**, covering the syllabus and/or manuals for IAEA training courses in the area of nuclear security; and **Service Guides**, which provide guidance on the conduct and scope of IAEA nuclear security advisory missions.

## DRAFTING AND REVIEW

International experts assist the IAEA Secretariat in drafting these publications. For Nuclear Security Fundamentals, Recommendations and Implementing Guides, open-ended technical meeting(s) are held by the IAEA to provide interested Member States and relevant international organizations with an appropriate opportunity to review the draft text. In addition, to ensure a high level of international review and consensus, the Secretariat submits the draft texts to all Member States for a period of 120 days for formal review. This allows Member States an opportunity to fully express their views before the text is published.

Technical Guidance publications are developed in close consultation with international experts. Technical meetings are not required, but may be conducted, where it is considered necessary, to obtain a broad range of views.

The process for drafting and reviewing publications in the IAEA Nuclear Security Series takes account of confidentiality considerations and recognizes that nuclear security is inseparably linked with general and specific national security concerns. An underlying consideration is that related IAEA safety standards and safeguards activities should be taken into account in the technical content of the publications.

OBJECTIVE AND  
ESSENTIAL ELEMENTS  
OF A STATE'S NUCLEAR  
SECURITY REGIME

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The Agency's Statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA held at United Nations Headquarters, New York; it entered into force on 29 July 1957. The Headquarters of the Agency are situated in Vienna. Its principal objective is "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world".

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ESSENTIAL ELEMENTS  
OF A STATE'S NUCLEAR  
SECURITY REGIME

NUCLEAR SECURITY FUNDAMENTALS

INTERNATIONAL ATOMIC ENERGY AGENCY  
VIENNA, 2013

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## FOREWORD

The possibility that nuclear material or other radioactive material could be used for criminal purposes or intentionally used in an unauthorized manner cannot be ruled out in the current global situation. States have responded to this risk by engaging in a collective commitment to strengthen the protection and control of such material and to respond effectively to nuclear security events. States have agreed to strengthen existing instruments and have established new international legal instruments to enhance nuclear security worldwide. Nuclear security is fundamental in the management of nuclear technologies and in applications where nuclear material or other radioactive material is used or transported.

Through its nuclear security programme, the IAEA supports States to establish, maintain and sustain an effective nuclear security regime. The IAEA has adopted a comprehensive approach to nuclear security. This recognizes that an effective national nuclear security regime builds on: the implementation of relevant international legal instruments; information protection; physical protection; material accounting and control; detection of and response to trafficking in such material; national response plans; and contingency measures. With its Nuclear Security Series, the IAEA aims to assist States in implementing and sustaining such a regime in a coherent and integrated manner.

The IAEA Nuclear Security Series comprises: Nuclear Security Fundamentals, which include the objective and essential elements of a State's nuclear security regime; Recommendations; Implementing Guides; and Technical Guidance.

Each State carries the full responsibility for nuclear security. Specifically, each State has the responsibility to provide for the security of nuclear material and other radioactive material and their associated facilities and activities; to ensure the security of such material in use, storage, or in transport; to combat illicit trafficking and the inadvertent movement of such material; and to be prepared to respond to a nuclear security event.

This publication is the Nuclear Security Fundamentals in the IAEA Nuclear Security Series. As the top level publication in the series, it provides the objective and essential elements of an appropriate and effective nuclear security regime. This publication is intended to be used by national policy makers, legislative bodies, competent authorities, institutions, and individuals involved in the establishment, implementation, maintenance, or sustainability of a State's nuclear security regime. It is based on a synthesis of provisions from the many international instruments that contribute to defining the international legal framework in the field of nuclear security. It is also based on the experiences of Member States in their existing nuclear security regimes, as well as the IAEA's experience in the areas of nuclear security, safety and safeguards.

The preparation of this publication has been made possible by the contribution of a large number of experts from Member States. An extensive consultation process with Member States included two open-ended technical meetings in Vienna, the first in November 2009, and the second in August–September 2010. Following the second technical meeting, the draft was then circulated to all Member States for 120 days to solicit further comments and suggestions. The comments received from Member States were reviewed and resolved by a representative panel of Member State representatives to produce the final version of this publication. The final text was approved by the Nuclear Security Guidance Committee in June 2012, followed in September 2012 by endorsement by the IAEA Board of Governors

#### *EDITORIAL NOTE*

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# 1. INTRODUCTION

## BACKGROUND

1.1. Nuclear security focuses on the prevention of, detection of, and response to, criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities, or associated activities*.<sup>1</sup> Other acts determined by the State to have an adverse impact on nuclear security should be dealt with appropriately.

1.2. Nuclear security and nuclear safety have in common the aim of protecting persons, property, society and the environment. Security measures and safety measures have to be designed and implemented in an integrated manner to develop synergy between these two areas and also in a way that security measures do not compromise safety and safety measures do not compromise security.

1.3. Nuclear security together with nuclear safety and applicable safeguards is essential for enjoying the many benefits of *nuclear material* and *other radioactive material* in industrial, agricultural, and medical applications, nuclear energy, and many other areas.

1.4. The responsibility for nuclear security within a State rests entirely with the State, which has to ensure the security of *nuclear material, other radioactive material, associated facilities, and associated activities* under its jurisdiction. Each State aims to achieve nuclear security by creating its own *nuclear security regime* which is appropriate to that State.

1.5. The threat of nuclear terrorism has been recognized as a matter of grave concern by all States. States also recognize that nuclear security in one State might depend on the effectiveness of the *nuclear security regimes* in other States. There is an increasing need for appropriate international cooperation to enhance nuclear security worldwide.

1.6. The evolution of the IAEA's nuclear security activities has occurred within a legal and policy framework that includes the Statute of the IAEA, resolutions of the IAEA Board of Governors and General Conference, resolutions of the

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<sup>1</sup> Italicized words in the text represent defined terms. Definitions of the terms are found in the Definitions section of this publication.

UN Security Council and UN General Assembly, as well as the established practices of the IAEA. Various international instruments, adopted under IAEA and other auspices, have also contributed to the IAEA's mandate and functions, as well as to the international legal framework, in the nuclear security field. These instruments are described in IAEA International Law Series No. 4, The International Legal Framework for Nuclear Security.

1.7. As part of its efforts in nuclear security, the IAEA's Board of Governors has approved a series of Nuclear Security Plans that set out the IAEA programmes for nuclear security. One component of the Nuclear Security Plans has been the development of the Nuclear Security Series of publications.

1.8. The IAEA Nuclear Security Series provides nuclear security fundamentals, recommendations, and implementing and technical guidance for Member States to assist them in implementing new *nuclear security regimes*, or in reviewing and if necessary strengthening existing *nuclear security regimes*. The series also serves as guidance for Member States in carrying out their efforts with respect to binding and non-binding international instruments.

1.9. The IAEA Nuclear Security Series is designed in a tiered approach with the fundamentals level publication providing the objective and essential elements for the entire *nuclear security regime*, recommendations level publications outlining what a *nuclear security regime* should address in specific areas of nuclear security, and the implementing and technical guidance publications providing detailed guidance about how to establish specific *nuclear security systems* and *nuclear security measures*.

1.10. This publication, hereinafter referred to as 'the Fundamentals', is the primary publication in the IAEA Nuclear Security Series. The objective and the essential elements of a *nuclear security regime* set forth in the Fundamentals are based on a synthesis of the provisions in the international instruments, the experiences of Member States in their existing *nuclear security regimes*, and the IAEA's experience in the areas of nuclear security, safety and safeguards.

## PURPOSE

1.11. The purpose of this publication is to assist Member States in enhancing nuclear security by providing national policy makers, legislative bodies, *competent authorities*, institutions, and individuals involved in the establishment, implementation, maintenance or sustainability of a State's *nuclear security*

*regime* with the objective and essential elements of the *nuclear security regime*. The Fundamentals set forth the basis for IAEA Nuclear Security Series publications.

## SCOPE

1.12. The Fundamentals apply to *nuclear material* and *other radioactive material*, whether under or out of *regulatory control*, and their *associated facilities* and *associated activities* under the jurisdiction of the State.

1.13. The Fundamentals provide a basis for the protection of persons, property, society and the environment from criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*, *associated facilities*, or *associated activities*, and other acts determined by the State to have an adverse impact on nuclear security.

1.14. For *nuclear material* and *other radioactive material* under *regulatory control*, the Fundamentals pertain only to material used for civil purposes. Member States may decide whether or not to extend the publication's use to other purposes.

## STRUCTURE

1.15. Section 1 gives an overall view on the background, purpose, scope and structure of the document. Section 2 presents the objective of a State's *nuclear security regime*. Section 3 contains the set of essential elements of a State's *nuclear security regime*. Italicized terms used in this publication are defined in the Definitions section.

## **2. OBJECTIVE OF A STATE'S NUCLEAR SECURITY REGIME**

2.1. The objective of a State's *nuclear security regime* is to protect persons, property, society, and the environment from harmful consequences of a *nuclear security event*.

2.2. With the aim of achieving this objective, States should establish, implement, maintain and sustain an effective and appropriate *nuclear security regime* to prevent, detect and respond to such *nuclear security events*.

2.3. The *nuclear security regime* is part of the State's overall security regime. The *nuclear security regime* covers *nuclear material* and *other radioactive material*, whether it is under or out of *regulatory control*, and *associated facilities* and *associated activities* throughout their lifetimes, and it should reflect the risks of harm to persons, property, society and the environment.

### **3. ESSENTIAL ELEMENTS OF A STATE'S NUCLEAR SECURITY REGIME**

The following set of twelve essential elements of an effective and appropriate *nuclear security regime* should be applied insofar as reasonable and practicable.

#### **ESSENTIAL ELEMENT 1: STATE RESPONSIBILITY**

3.1. Responsibility rests with the State for meeting the objective set forth in Section 2 by establishing, implementing, maintaining and sustaining a *nuclear security regime* applicable to *nuclear material*, *other radioactive material*, *associated facilities*, and *associated activities* under a State's jurisdiction.

#### **ESSENTIAL ELEMENT 2: IDENTIFICATION AND DEFINITION OF NUCLEAR SECURITY RESPONSIBILITIES**

3.2. Nuclear security responsibilities of *competent authorities* designated by the State, as described in Essential Element 3, including *regulatory bodies* and those *competent authorities* related to border control and law enforcement, and responsibilities for all *authorized persons*, are clearly identified and defined. Provisions are identified and defined for appropriate integration and coordination of responsibilities within the *nuclear security regime*, as well as for the State's oversight to ensure the continued appropriateness of the nuclear security responsibilities.

## ESSENTIAL ELEMENT 3: LEGISLATIVE AND REGULATORY FRAMEWORK

3.3. The legislative and regulatory framework, and associated administrative measures, to govern the *nuclear security regime*:

- (a) Establish *competent authorities*, including *regulatory bodies*, with adequate legal authority to fulfil their assigned nuclear security responsibilities.
- (b) Assign the nuclear security responsibilities identified in Essential Element 2 of each *competent authority*, including those of the *regulatory bodies* having nuclear security responsibilities, and provide these authorities with sufficient financial, human and technical resources to fulfil these responsibilities.
- (c) Establish measures to ensure proper coordination and communication among *competent authorities*, and between *competent authorities* and *authorized persons*, in fulfilling their nuclear security responsibilities.
- (d) Ensure that *regulatory bodies* have appropriate independence in their nuclear security decision making. Independence includes both functional and financial independence from the entities they regulate and from any other bodies that deal with the promotion or utilization of *nuclear material* or *other radioactive material*.
- (e) Provide for the establishment of nuclear security regulations and requirements, and associated procedures for evaluating applications and granting *authorizations* or licenses.
- (f) Provide for the establishment of systems and measures to ensure that *nuclear material* and *other radioactive material* are appropriately accounted for or registered and are effectively controlled and protected.
- (g) Provide for the establishment of regulations and requirements for protecting the confidentiality of *sensitive information* and for protecting *sensitive information assets*.
- (h) Ensure that prime responsibility for the security of *nuclear material*, *other radioactive material*, *associated facilities*, *associated activities*, *sensitive information* and *sensitive information assets* rests with the *authorized persons*.
- (i) Ensure that there are procedures for the State, or a designated entity, to assume the primary responsibility for security in the absence of *authorized persons*.
- (j) Establish law enforcement systems and measures relevant to nuclear security. These systems and measures should include those for the export, import, and for border control of *nuclear material* and *other radioactive material*. This includes security procedures for transport that are consistent

with the responsibilities as set forth in Essential Element 4 when international transport is involved.

- (k) Take appropriate and effective steps to prevent, deter, detect, respond to, and otherwise combat illicit trafficking in *nuclear material* and *other radioactive material*.
- (l) Establish verification and enforcement measures to ensure compliance with applicable laws, regulations and requirements, including the imposition of appropriate and effective sanctions.

#### ESSENTIAL ELEMENT 4: INTERNATIONAL TRANSPORT OF NUCLEAR MATERIAL AND OTHER RADIOACTIVE MATERIAL

3.4. The responsibility of a State for ensuring that *nuclear material* and *other radioactive material* are adequately protected extends to the international transport thereof, until that responsibility is properly transferred to another State, as appropriate.

#### ESSENTIAL ELEMENT 5: OFFENCES AND PENALTIES INCLUDING CRIMINALIZATION

3.5. A *nuclear security regime* includes measures for:

- (a) Defining as offences or violations under domestic laws or regulations those criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities* or *associated activities*;
- (b) Appropriately dealing with other acts determined by the State to have an adverse impact on nuclear security;
- (c) Establishing appropriate penalties that are proportionate to the gravity of the harm that could be caused by commission of the offences or violations;
- (d) Establishing the jurisdiction of the State over such offences or violations;
- (e) Providing for the prosecution or, as appropriate, extradition of alleged offenders.



## ESSENTIAL ELEMENT 6: INTERNATIONAL COOPERATION AND ASSISTANCE

3.6. A *nuclear security regime* provides for cooperation and assistance between and among States, either directly or through the IAEA or other international organizations, by:

- (a) Making known designated points of contact for notification, assistance and cooperation;
- (b) Providing timely information as appropriate to States affected or likely to be affected or concerned about criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities* or *associated activities*, or credible threats thereof;
- (c) Providing timely response to requests for assistance on nuclear security related matters, including requests for the recovery and protection of *nuclear material* and *other radioactive material*; requests for technical support, including nuclear forensic assistance; and requests for mutual legal assistance;
- (d) Cooperating and exchanging experiences and information, including on the establishment, implementation, maintenance and sustainability of *nuclear security systems*;
- (e) Ensuring through appropriate arrangements that *sensitive information* or other information exchanged in confidence is adequately and appropriately protected.

## ESSENTIAL ELEMENT 7: IDENTIFICATION AND ASSESSMENT OF NUCLEAR SECURITY THREATS

3.7. A *nuclear security regime* ensures that:

- (a) *Nuclear security threats*, both internal and external to the State, are identified and assessed, including their credibility, regardless of whether the *targets* of internal *nuclear security threats* are within or outside the jurisdiction of the State;
- (b) The State's assessments of *nuclear security threats* are kept up to date;
- (c) The State's assessments are used in implementing the State's *nuclear security regime*.

## ESSENTIAL ELEMENT 8: IDENTIFICATION AND ASSESSMENT OF TARGETS AND POTENTIAL CONSEQUENCES

3.8. A *nuclear security regime* ensures that:

- (a) *Targets* under the State's jurisdiction are identified and assessed to determine if they require protection from *nuclear security threats*;
- (b) The assessment is based on the potential consequences should the *targets* be compromised;
- (c) An up to date assessment of such *targets* is maintained.

## ESSENTIAL ELEMENT 9: USE OF RISK INFORMED APPROACHES

3.9. A *nuclear security regime* uses risk informed approaches, including in the allocation of resources for *nuclear security systems* and *nuclear security measures* and in the conduct of nuclear security related activities that are based on a *graded approach* and *defence in depth*, which take into account the following:

- (a) The State's current assessment of the *nuclear security threats*, both internal and external;
- (b) The relative attractiveness and vulnerability of identified *targets* to *nuclear security threats*;
- (c) Characteristics of the *nuclear material, other radioactive material, associated facilities* and *associated activities*;
- (d) Potential harmful consequences from criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities, associated activities, sensitive information or sensitive information assets*, and other acts determined by the State to have an adverse impact on nuclear security.

## ESSENTIAL ELEMENT 10: DETECTION OF NUCLEAR SECURITY EVENTS

3.10. A *nuclear security regime* ensures that *nuclear security systems* and *nuclear security measures* are in place at all appropriate organizational levels to detect and assess *nuclear security events* and to notify the relevant *competent authorities* so that appropriate response actions can be initiated, including:

- (a) At *associated facilities*;
- (b) During conduct of *associated activities*;
- (c) At *major public events* or *strategic locations*, including locations of critical infrastructure, as designated by the State;
- (d) In searches for, recoveries of, or discoveries of *nuclear material* or *other radioactive material* that is missing or lost or otherwise out of *regulatory control*;
- (e) Within the State's territory or on board its ships or aircraft, and at its international borders.

ESSENTIAL ELEMENT 11: PLANNING FOR, PREPAREDNESS FOR, AND RESPONSE TO, A NUCLEAR SECURITY EVENT

3.11. A *nuclear security regime* ensures that relevant *competent authorities* and *authorized persons* are prepared to respond, and respond appropriately, at local, national, and international levels to *nuclear security events* by:

- (a) Developing arrangements and response plans for ensuring:
  - (i) Rapid and effective mobilization of resources in response to a *nuclear security event*;
  - (ii) Effective coordination and cooperation during response to a *nuclear security event* among all those carrying out response functions (including intelligence, law enforcement, crime scene investigation, and nuclear forensics) and between the security and safety aspects of the response;
  - (iii) Effective use of relevant international emergency assistance and response systems;
  - (iv) Investigation of any *nuclear security event* and, as appropriate, prosecution or extradition of alleged offenders.
- (b) Periodically exercising, testing, and evaluating the plans for effectiveness by relevant *competent authorities* and *authorized persons* with the aim of ensuring timely implementation of comprehensive measures to:
  - (i) Mitigate and minimize harmful consequences to persons, property, society, and the environment from *nuclear security events*;
  - (ii) Locate, recover, and secure *nuclear material* and *other radioactive material* that is out of *regulatory control*;
  - (iii) Feed back into the preparedness process, including into the response plans, the results of exercises and tests of the plans, and of experience.

## ESSENTIAL ELEMENT 12: SUSTAINING A NUCLEAR SECURITY REGIME

3.12. A *nuclear security regime* ensures that each *competent authority* and *authorized person* and other organizations with nuclear security responsibilities contribute to the sustainability of the *regime* by:

- (a) Developing, implementing, and maintaining appropriate and effective integrated management systems including quality management systems;
- (b) Demonstrating leadership in nuclear security matters at the highest levels;
- (c) Developing, fostering and maintaining a robust *nuclear security culture*;
- (d) Allocating sufficient human, financial and technical resources to carry out the organization's nuclear security responsibilities on a continuing basis using a risk informed approach;
- (e) Routinely conducting maintenance, training, and evaluation to ensure the effectiveness of the *nuclear security systems*;
- (f) Having in place processes for using best practices and lessons learned from experience;
- (g) Establishing and applying measures to minimize the possibility of *insiders* becoming *nuclear security threats*;
- (h) Routinely performing assurance activities to identify and address issues and factors that may affect the capacity to provide adequate nuclear security, including cyber security, at all times.

## DEFINITIONS

*This section contains the definitions of italicized terms used in this publication. The definitions given below may not necessarily conform to definitions adopted elsewhere for international use. Examples have been added to some definitions in order to assist the reader in understanding the definition. When examples are given they are not intended to be exhaustive, or to limit the definition in any manner.*

**associated activity.** The possession, production, processing, use, handling, storage, disposal or transport of *nuclear material* or *other radioactive material*.

**associated facility.** A facility (including associated buildings and equipment) in which *nuclear material* or *other radioactive material* is produced, processed, used, handled, stored or disposed of and for which an *authorization* is required.

**authorization.** The granting by a *competent authority* of written permission for operation of an *associated facility* or for carrying out an *associated activity*, or a document granting such permission.

**authorized person.** A natural or legal person that has been granted an *authorization*. An *authorized person* is often referred to as a ‘licensee’, or ‘operator’.

**competent authority.** A governmental organization or institution that has been designated by a State to carry out one or more nuclear security functions.

—*Example: Competent authorities may include regulatory bodies, law enforcement, customs and border control, intelligence and security agencies, health agencies, etc.*

**defence in depth.** The combination of successive layers of *nuclear security systems* and *nuclear security measures* for the protection of *targets* from *nuclear security threats*.

**graded approach.** The application of *nuclear security measures* proportionate to the potential consequences of criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*,

*associated facilities* or *associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

**insider.** An individual with authorized access to *associated facilities* or *associated activities* or to *sensitive information* or *sensitive information assets*, who could commit, or facilitate the commission of criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*, *associated facilities* or *associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

**major public event.** A high profile event that a State has determined to be a potential *target*.

**nuclear facility.** A facility (including associated buildings and equipment) in which *nuclear material* is produced, processed, used, handled, stored or disposed of and for which an *authorization* or license is required.

**nuclear material.** Any material that is either *special fissionable material* or *source material* as defined in Article XX of the IAEA Statute.

— ***Special fissionable material:*** Plutonium-239; uranium-233; *uranium enriched in the isotopes 235 or 233*; any material containing one or more of the foregoing; and such other fissionable material as the Board of Governors shall from time to time determine; but not including *source material*.

— ***Uranium enriched in the isotopes 235 or 233:*** Uranium containing the isotopes 235 or 233 or both in an amount such that the abundance ratio of the sum of these isotopes to the isotope 238 is greater than the ratio of the isotope 235 to the isotope 238 occurring in nature.

— ***Source material:*** Uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors shall from time to time determine; and such other material as the Board of Governors shall from time to time determine. (Note: *source material* does not include ore or ore residue.)

**nuclear security culture.** The assembly of characteristics, attitudes and behaviours of individuals, organizations and institutions which serve as a means to support, enhance, and sustain nuclear security.

**nuclear security event.** An event that has potential or actual implications for nuclear security that must be addressed.

**nuclear security measures.** Measures intended to prevent a *nuclear security threat* from completing criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities, or associated activities* or to detect or respond to *nuclear security events*.

**nuclear security regime.** A regime comprising:

- The legislative and regulatory framework and administrative systems and measures governing the nuclear security of *nuclear material, other radioactive material, associated facilities and associated activities*;
- The institutions and organizations within the State responsible for ensuring the implementation of the legislative and regulatory framework and administrative systems of nuclear security;
- *Nuclear security systems and nuclear security measures* for the prevention of, detection of and response to *nuclear security events*.

**nuclear security system.** An integrated set of *nuclear security measures*.

**nuclear security threat.** A person or group of persons with motivation, intention and capability to commit criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities or associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

**operator.** Any person, organization, or government entity licensed or authorized to undertake the operation of an *associated facility* or to perform an *associated activity*.

**other radioactive material.** Any *radioactive material* that is not *nuclear material*.

**radioactive material.** Any material designated in national law, regulation, or by a *regulatory body* as being subject to *regulatory control* because of its *radioactivity*. In the absence of such a designation by a State, *radioactive material* is any material for which protection is required by the current version of the International Basic Safety Standards<sup>2</sup>.

**regulatory body.** One or more authorities designated by the government of a State as having legal authority for conducting the regulatory process, including issuing *authorizations*.

**regulatory control.** Any form of institutional control applied to *nuclear material* or *other radioactive material*, *associated facilities*, or *associated activities* by any *competent authority* as required by the legislative and regulatory provisions related to safety, security, or safeguards.

— *Explanation:* The phrase ‘out of *regulatory control*’ is used to describe a situation where *nuclear material* or *other radioactive material* is present in sufficient quantity that it should be under *regulatory control*, but control is absent, either because controls have failed for some reason, or they never existed.

**sensitive information.** Information, in whatever form, including software, the unauthorized disclosure, modification, alteration, destruction, or denial of use of which could compromise nuclear security.

**sensitive information assets.** Any equipment or components that are used to store, process, control or transmit *sensitive information*.

— *Example:* *Sensitive information assets* include control systems, networks, information systems and any other electronic or physical media.

**strategic location.** A location of high security interest in the State which is a potential *target* for terrorist attacks using *nuclear material* or *other radioactive material*, or a location at which *nuclear material* or *other radioactive material* that is out of *regulatory control* is located.

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<sup>2</sup> At the time of publication, the current version is: INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards — Interim Edition, IAEA Safety Standards Series No. GSR Part 3 (Interim), IAEA, Vienna (2011).



**target.** *Nuclear material, other radioactive material, associated facilities, associated activities, or other locations or objects of potential exploitation by a nuclear security threat, including major public events, strategic locations, sensitive information, and sensitive information assets.*





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